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A NEW EMBEDDING STAGE

A new electrically heated embedding stage prepared according to designs prepared by laboratory men in this university has been recently put on the market by Eberbach & Co. of Ann Arbor. The essential parts of this embedding stage (see cut, Pl. XXI, Fig. 2) are a transite base 17¾ inches long by 4½ inches wide mounted on three levelling screws, a copper stage made in two parts, 4 by 13 inches and 4 by 4 inches respectively, and under one end of the longer copper stage an electric heating unit. The heating unit may be wound for any voltage and to yield any desired temperature. Those in use in the Zoölogical Laboratory are designed for 110 v. alternating or direct current and the current requirement is 0.5 ampere. This yields a temperature of about 74° C. No regulator or rheostat or other provision for controlling or varying the temperature is provided but since the coil is situated under one end of the stage lower temperatures may be secured by moving the object away from coil. A scale to indicate the gradations of temperature could be attached if desired. In practice the coil is attached to a convenient electric receptacle near the paraffine bath and that part of the stage over the coil is heated sufficiently to melt paraffine in a few minutes. The embedding tray may now be warmed over the hot stage, filled with melted paraffine and moved to a point on the stage where the paraffine is kept just melted. Objects to be embedded are now transferred to the embedding tray, oriented, and the label inserted at the end of the tray with the legend towards the margin of the tray. Now the tray is gently moved to the unheated end of the stage where the paraffine is permitted to congeal on the bottom sufficiently to hold the objects in place. Then the tray is transferred to a dish of cold water or alcohol standing at the end of the embedding stage and into which it is immersed as soon as the paraffine is cooled sufficiently to prevent the breaking of the surface film by the water.

The use of this embedding stage makes unnecessary the use of the top of the paraffine bath for this purpose. Its use helps greatly in securing good embedding because it permits the paraffine to be melted clear to the bottom of the embedding tray and thus the orientation is made easy. The plan of allowing the object to lie on a layer of congealed paraffine is not only unnecessary but is faulty in that the paraffine is too soft to permit accurate orientation of the object and also because a cleavage plane is formed at which the paraffine frequently breaks during the sectioning. The stage is convenient to use, does away with the necessity of using gas, and largely obviates the danger of overheating the tissue which danger is always present when a gas flame is used for heating the ordinary stage. This stage because of its low construction is very stable, unlike the very insecure stage used with the gas flame, and with the levelling screws it may be levelled. In several months' use by a class no objectionable features have appeared and its good points are only the better appreciated.

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MAKING GLASS PLATES FOR COVERING MUSEUM JARS

At this time when it is impossible to secure from abroad the glass plates for covering museum jars it is worth while to know that after a little practise passable plates may be made in any laboratory equipped with power grinding and buffing machinery. Double strength glass plates may be purchased cut to size or they may be cut in the laboratory. Their edges may be rounded and a narrow ground surface at the margin may be secured by grinding on a carborundum wheel designated 120J-G5 which can be purchased from the Carborundum Co., Niagara Falls. The size of the wheel will depend somewhat on the power and speed of the grinder. In this laboratory a 4½ by ½ inch wheel belted to a ½ h. p. motor